

Sample SOP for PhD in Astrophysics

“The universe seems neither benign nor hostile, merely indifferent”- Carl Sagan

Astrophysicists seek to understand the study of celestial objects and phenomena using physics, and mathematical calculations to explain the origins and evolution. My interest towards the branch of space science that applies the laws of physics began during schooling and gradually arose with the studies I took up.

This interest drove me to study further and as a result, I ended up doing my Master's in astrophysics at the Indian Institute of Astrophysics (IIA). This helped me to develop knowledge of physics related to the universe, especially in the areas of gravitational dynamics, quantum mechanics etc. The master's thesis titled “How the cluster environment of young stars affect planet formation” was studied taking into account cluster dynamics and models to calculate a characteristic time-averaged measure of FUV flux exposure of young low-mass stars in these clusters. As a part of the project, we used clusters with massive star content and did data analysis, programming, scientific writings etc. This project taught me many new findings and grew my interest to know more about astronomy further that has prompted me to seek PhD admission.

Coming to my undergraduate education, I did my Bachelors degree in Physics from IIT, Kanpur. This 3-year degree course equipped me with good knowledge on mathematical and nuclear physics etc. and also helped me to gain expertise in lab work through some practical sessions and training.

After my graduation, I was selected as a summer research fellow at IIA, Bangalore. I worked on the research topic “galaxy clusters and gravitationally lensed distant galaxies”. Under the guidance of esteemed professors, I studied distant galaxies using radio and optical/IR telescopes and published research papers related to the same. Working as a research assistant made me knowledgeable about the concept as well as helped me to identify my field of interest. Eventually, I completed my masters from the same university.

I wish to deepen my knowledge further in the field of astronomy under the esteemed guidance of Dr. ABC and Dr. AYC at your organisation. I feel the department of physics & astronomy at the XYZ university is one of the most active departments in the country with good multidisciplinary research and practical/lab expertise.

As a PhD aspirant, pursuing further studies will help me to excel my knowledge and also will aid me to discover new concepts/findings that expand my career horizons in the chosen field of study. I am extremely certain and can cope with all the rigours related to the study.